A new subspecies of *Grevillea variifolia* (Proteaceae)

During a floristic survey of the limestone hills and outcrops forming Cape Range peninsula in Western Australia (Keighery & Gibson 1993), it became apparent that *Grevillea variifolia* contains two distinct leaf variants that are geographically separated. The type form occurs on the massive Tertiary limestones of Cape Range. The other occurs south and east of the Range on the Pleistocene limestones of the Rough Range and the Quaternary calcarenite ridges between Coral Bay and Cape Cuvier, where the climate is more arid (Keighery and Gibson 1993). Plants from these low outcrops have smaller, harder leaves with pungent triangular points rather than broad shallow lobing between the more numerous points of leaves from Cape Range. These variants are considered to be morphologically and geographically distinct and are worthy of taxonomic recognition.

In their comprehensive treatment of the genus *Grevillea*, Olde & Marriott (1995a,b) foreshadowed the taxonomic recognition of geographic leaf variants in *Grevillea acuaria* F. Muell. ex Benth., *G. nudiflora* Meisn., *G. oncogyne* Diels and *G. pectinata* R. Br., without noting rank. They did recognize geographic leaf variants in *Grevillea apiciloba* F. Muell., *G. biformis* Meisn., *G. curviloba* McGill., *G. didymobotrya*, *G. diversifolia* Meisn., *G. manglesii* (Graham) Planch., *G. nana* C.A. Gardner, *G. patentiloba* F. Muell., *G. pauciflora* R.Br., *G. rigida* Olde & Marriott, *G. sarisa* S. Moore, *G. shuttleworthiana* Meisn. and *G. thyrsoides* Meisn. at the subspecies level. In only one case, did they treat a leaf form as a separate species, distinguishing *Grevillea evanescens* Olde & Marriott from *G. obtusifolia* Meisn. They saw only limited material of *Grevillea variifolia* and commented (Olde & Marriott 1995b: 217) that the species showed "some variation in leaf size, shape, degree of division and colour". Therefore, since geographic variation in leaf characters appears widespread in the genus and is usually accorded subspecies rank, this rank is adopted here.

Taxonomy

Grevillea variifolia C.A.Gardner & A.S.George, *J. Roy. Soc. W. Australia* 46: 129–130 (1963). *Type:* Cape Range, near number 3 well, 2 June 1961, *A.S. George* 2477 (*holo:* PERTH 1137859).

Grevillea variifolia C.A.Gardner & A.S.George subsp. ***variifolia***

Mature leaves with a petiole 3–6 mm long; lamina usually oblanceolate to narrowly cuneate, 17–43 mm long (usually greater than 25 mm), 15–22 mm wide; apex usually obtuse, rarely acute or pungent with 3–7 subsidiary points.

Other specimens examined. WESTERN AUSTRALIA: Cape Range, 18 Aug. 1956, *K. McWhae s.n.* (PERTH); Charles Knife Rd, Cape Range, *A.S. George* 1340 (PERTH); Charles Knife Rd, Cape Range, *Hj. Eichler* 22581 (AD, PERTH); Vlaming Head, *A.S. George* 1369 (PERTH); Cape Range, *W. Rogerson* 424, 297 (PERTH); 1 mile [1.6 km] S of Vlaming Head, *A.S. George* 2577 (PERTH); Walk trail between Shothole Canyon and Charles Knife Rd, *S. Moore* 217 (PERTH); Cape Range, *H. Demarz* 5789 (PERTH); Sandy Bay, Learmonth track, *T. Tapper* 10 (PERTH); 200 m N of Milyering Visitors Centre, Cape Range, *R. Karniewicz* 007 (PERTH); Mandu Mandu Gorge, *G.J. Keighery* 12858 (PERTH).

Distribution and habitat. North-west Western Australia in the Carnarvon Botanical District. Confined to the massive Tertiary limestones of the Cape Range.

Conservation status. Many populations in Cape Range National Park.

Flowering period. June to September.

Grevillea variifolia subsp. ***bundera*** G.J. Keighery, *subsp. nov.*

A *Grevillea variifolia* affinis differt a foliis duris, lobis triangularibus, lobis pungentibus.

Typus: 15.6 km north of Coral Bay turnoff on Exmouth Road, Western Australia, 25 August 1992, *G.J. Keighery & N. Gibson* 323 (PERTH 04055217).

Mature leaves with a petiole *c.* 2 mm long; lamina normally triangular, 11–15 mm long, to 8 mm wide, rigid, with up to 5 lobes, each lobe with a pungent mucrone 2–4 mm long. (Figure 1)

Figure 1. *Grevillea variifolia* subsp. *bundera*. A – flowering branch, B – leaf, C – flower. Scale bar = 10 mm. Drawn from the type population, voucher *G.J. Keighery & N. Gibson* 323.

Other specimens examined. WESTERN AUSTRALIA: Warroora Track, *H. Demarz* 11758 (Kings Park, PERTH); 79 miles [127 km] S of Learmonth, *A.S. George* 2404 (PERTH); Learmonth Road, 22 miles [35 km] N of Warroora turnoff, *A.S. George* 3286 (PERTH); Gnaraloo, *Gready* 4 (PERTH); 60 km N of North West Coastal Highway on Exmouth Road, *E. Wittwer* 1756 (KPBG, PERTH); 15 miles [24 km] N of Warroora turnoff, *J.S. Beard* 2530 (KPBG, PERTH); Rough Range, *G.J. Keighery & N. Gibson* 300 (PERTH).

Distribution and habitat. North-west Western Australia in the Carnarvon Botanical District. Confined to Quaternary Bundera calcarenites and Pleistocene limestones (Rough Range), usually overlain by recent red sand between Cape Cuvier and Rough Range.

Conservation status. Widespread and probably not in danger, but is not known from any conservation reserve.

Flowering period. May to September, with one collection in April. When surveyed in April 1996 no plants were flowering; flowering may depend on cyclonic rain.

Etymology. Named after the Quaternary Bundera calcarenites to which this taxon is a common and distinctive component of the shrub flora.

References

Gardner, C.A. & George, A.S. (1963). Eight new plants from Western Australia. *Journal of the Royal Society of Western Australia* 46: 129–138.

Keighery, G.J. & Gibson, N. (1993). Biogeography and composition of the flora of Cape Range Peninsula, Western Australia. *In:* Humphries, W.F. (ed.). The Biogeography of Cape Range, Western Australia. *Records of the Western Australian Museum.* Supplement 45, pp. 51–85.

Olde, P. & Marriott, N. (1995a). "The Grevillea Book." Vol. 2. (Kangaroo Press: Kenthurst, New South Wales.)

Olde, P. & Marriott, N. (1995b). "The Grevillea Book." Vol. 3. (Kangaroo Press: Kenthurst, New South Wales.)

G.J. Keighery

Department of Conservation and Land Management, Wildlife Research Centre, PO Box 51, Wanneroo, Western Australia 6065.